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## THE PROFESSIONAL BOARD FOR SPEECH, LANGUAGE AND HEARING PROFESSIONS

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### POSITION STATEMENT ON TREATMENT OF PATIENTS USING NEUROMUSCULAR ELECTRICAL STIMULATION (NMES)

#### INTRODUCTION

This document was developed by the HPCSA SLH Professional Board Working Group, on behalf of the Board, in response to concerns and queries received about Neuromuscular Electrical Stimulation (NMES). This document is guided by literature, international professional association position papers; including American Speech-Language-Hearing Association (ASHA), New Zealand Speech-Language Therapists Association (NZSTA), National Institute for Health and Care Excellence (NICE), as well as by the Ethical Rules of Conduct for Practitioners Registered under the Health Professions Act, 1974, and the Health Professions Act 56 of 1974. Reference herein to any specific program, product, process, service, or manufacturer does not constitute or imply endorsement or recommendation by the HPCSA SLH Professional Board.

#### What is NMES?

Neuromuscular electrical stimulation [NMES] involves the use of electrical current to stimulate the nerves or nerve endings that innervate muscle beneath the skin. Electrical stimulation may be applied superficially on the skin (transcutaneously) or directly into a muscle or muscles (intramuscularly) for the primary purpose of enhancing muscle function. The basic theoretical premise is that if the peripheral nerve can be stimulated, the resulting excitation impulse will be transmitted along the nerve to the motor endplates in the muscle, producing a muscle contraction. Patients with central nervous system abnormalities, but intact peripheral nerve function, have been considered candidates for NMES.

## **POSITION STATEMENT:**

In executing its responsibility of guiding the profession and protecting the public, the Board is issuing this position statement on the use of NMES in the management of patients within the South African context.

To date, there remains a paucity of clinical and research evidence about the efficacy, side effects, and other risks, to support the use of electrical stimulation as a treatment strategy for patients, including the paediatric population. The HPCSA SLH Board is strongly committed to evidence-based practice and urges practitioners to critique and evaluate the strength of the evidence before utilizing any product or technique in clinical care. Practitioners are reminded that they should only identify treatment options as being appropriate if based on up-to-date research and clinical evidence. Practitioners shall not provide a service or perform or direct procedures to be performed on a patient that are neither indicated nor scientific or have been shown to be ineffective, harmful or inappropriate through evidence-based review. Practitioners shall fully inform patients of the nature and possible effects of services rendered and products dispensed, and they shall inform participants in research about the possible risks of their participation in research conducted. Practitioners shall in the conduct and scope of their practice, use only an apparatus or health technology, which proves upon investigation to be capable of fulfilling the claims in regard to it.

While there may be preliminary evidence that application of neuromuscular electrical stimulation in swallowing rehabilitation may present as an adjunct approach for swallowing impairment under some limited conditions, this information remains not yet confirmed. Based on available published literature and the ethical guidelines that govern clinical practice, it is thus the position of the HPCSA SLH Board that application of this treatment modality in swallowing rehabilitation cannot be supported by empirical evidence, has the under-evaluated potential to cause harm and long-term side effects for the paediatric population, and does not meet the expectations for evidence-based practice. More research is necessary to determine the efficacy of NMES. Research designs that encompass different aetiologies and different treatment approaches in combination with NMES are required. These studies must adhere to recognised ethical rules and regulations pertaining to research.

## **HPCSA PROFESSIONAL, ETHICAL AND BUSINESS PRACTICE GUIDELINES**

Failure by practitioners to comply with the Ethical Rules of Conduct shall constitute an act or omission in respect of which the Board may take disciplinary steps in terms of Chapter IV of the Act.

### **ACKNOWLEDGEMENTS: 2020 HPCSA SLH BOARD POSITION STATEMENT COMPILED BY:**

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